



COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

Atty Dkt No. PP00362.102
2302-0362

PATENT

FORM PTO-1449 (Modified)
LIST OF PATENTS AND PUBLICATIONS
FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT
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Sheet 1 of 2

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In the Application of
RAPPUOLI et al.

Serial No.: 09/674,183

Art Unit: 1645

Filed: November 14, 2000

Examiner: S. Devi

Title: POLYEPITOPE CARRIER PROTEINS

U.S. PATENT DOCUMENTS

Exam. Init.	Ref. Desig.	Document No.	Date	Name	Class	Sub Class	Filing Date
SD	AA-1	4,882,317	November 21, 1989	Marburg, et al.	514	54	
SD	AB-1	4,902,506	February 20, 1990	Anderson, et al.	424	92	

FOREIGN PATENT DOCUMENTS

Exam. Init.	Ref. Desig.	Document No.	Publication Date	Country or Patent Office	Class	Sub Class	Translation YES NO
SD	AC-1	EP 0 429 816 A	June 5, 1991	PCT			
SD	AD-1	WO 96/03144	February 8, 1996	PCT			
SD	AE-1	WO 98/43677	October 8, 1998	PCT			

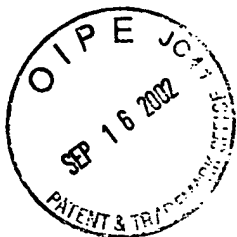
OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)

Exam. Init.	Ref. Desig.	Description
SD	AF-1	AN L.L. et al., "A multivalent minigene vaccine, containing B-cell, cytotoxic T-lymphocyte and Th epitopes from several microbes, induces appropriate responses in vivo and confers protection against more than one pathogen," <i>Journal of Virology</i> , 71(3)2292-2302 (1997)

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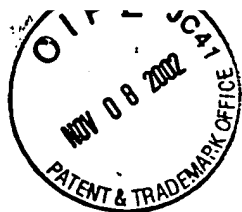
Exam. Init.	Ref. Desig.	Description
SD	AG-1	Christodoulides M. et al., "Immunization with a multiple antigen peptide containing defined B- and T-cell epitopes: production of bactericidal antibodies against group B Neisseria meningitidis," <i>Microbiology</i> , <u>140</u> (11):2951-2960(1994)
SD	AH-1	De Velasco E. A. et al., "Synthetic peptides representing T-cell epitopes act as carriers in pneumococcal polysaccharide conjugate vaccines," <i>Infection and Immunity</i> , <u>63</u> (3):961-968(1995)
SD	AI-1	Paradiso, Peter R. et al., "Novel approaches to the development of glycoconjugate vaccines with synthetic peptides as carriers," <i>Vaccine Res.</i> , <u>2</u> (4):239-48(1993)
SD	AJ-1	Thomson S. A. et al., "Targeting a polyepitope protein incorporating multiple class II-restricted viral epitopes to the secretory/endocytic pathway facilitates immune recognition by CD4+ cytotoxic T lymphocytes: a novel approach to vaccine design," <i>Journal of Virology</i> , <u>72</u> (3):2246-2252 (1998)

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Exam. Init.	Ref. Desig.	Document No.	Date	Name	Class	Sub Class	Filing Date
SD	A1	4,695,624	22 September 1987	Marburg et al.	530	395	
	A2	4,882,317	21 November 1989	Marburg et al.			

FOREIGN PATENT DOCUMENTS

Exam. Init.	Ref. Desig.	Document No.	Publication Date	Country or Patent Office	Class	Sub Class	Translation YES NO
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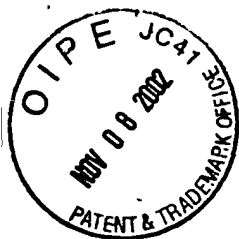
OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)

Exam. Init.	Ref. Desig.	Description
SD	C1	Agadjanyan et al., "Peptide mimicry of carbohydrate epitopes on human immunodeficiency virus", <i>Nature Biotechnol.</i> , 15:547-551, (1997)

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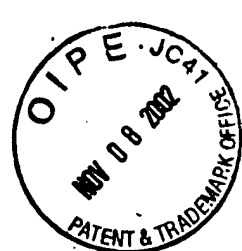
Title: POLYEPITOPE CARRIER PROTEINS

Exam. Init.	Ref. Desig.	Description
SD	C2	Ahlers et al., "Construction of an HIV-1 Peptide Vaccine Containing a Multideterminant Helper Peptide Linked to a V3 Loop Peptide 18 Inducing Strong Neutralizing Antibody Responses in Mice of Multiple MHC Haplotypes after Two Immunizations", <i>J. of Immun.</i> , <u>150</u> (12),5647-5665,(1993).
	C3	Andreoni et al., "Vaccination and the Role of Capsular Polysaccharide Antibody in Prevention of Recurrent Meningococcal Disease in Late Complement Component-Deficient Individuals", <i>J. Infect. Dis.</i> , <u>168</u> :227-231,(1993).
	C4	Anderson et al., "Antibody Responses to <i>Haemophilus influenzae</i> Type b and Diphtheria Toxin Induced by Conjugates of Oligosaccharides of the Type b Capsule with the Nontoxic Protein CRM", <i>Infect. Immun.</i> , <u>39</u> (1):233-238,(1983).
	C5	Anderson et al., "Immunization of 2-month-old infants with protein-coupled oligosaccharides derived from the capsule of <i>Haemophilus influenzae</i> type b", <i>J. Pediatrics</i> , <u>107</u> :346-351,(1985).
	C6	Anderson et al., "Immunogens Consisting of Oligosaccharides from the Capsule of <i>Haemophilus influenzae</i> Type b Coupled to Diphtheria Toxoid or the Toxin Protein CRM197", <i>J. Clin. Invest.</i> , <u>76</u> :52-59,(1985).
	C7	Bixler et al., "Synthetic Peptide Representing a T-Cell Epitope of CRM197 Substitutes as Carrier Molecule in a <i>Haemophilus Influenzae</i> Type b (HIB) Conjugate Vaccine", <i>Advances in Exper. Med. Bio.</i> , <u>251</u> :175-180,(1989).
	C8	Chang et al., "Anergy in Immature B Lymphocytes Differential Responses to Receptor-Mediated Stimulation and T Helper Cells", <i>J. Immun.</i> , <u>147</u> (3), 750-756, (1991).
SD	C9	Constantino et al., "Development and phase 1 clinical testing of a conjugate vaccine against meningococcus A and C", <i>Vaccine</i> , <u>10</u> (10), 691-698, (1992).

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SD	C10	Dick et al., "Glycoconjugates of Bacterial Carbohydrate Antigens", <i>Conjugate Vaccines</i> , <u>10</u> :48-114, (1989).
	C11	Etlinger et al., "Use of Prior Vaccinations for the Development of New Vaccines", <i>Science</i> , <u>249</u> :423-425, (1990).
	C12	Goldblatt et al., "Role of Cell Wall Polysaccharide in the Assessment of IgG Antibodies to the Capsular Polysaccharides of <i>Streptococcus pneumoniae</i> in Childhood", <i>J. Infect. Dis.</i> , <u>166</u> :632-634, (1992).
	C13	Good et al., "Construction of Synthetic Immunogen: Use of New T-Helper Epitope on Malaria Circumsporozoite Protein", <i>Science</i> , <u>235</u> :1059-1062, (1987).
	C14	Grandoff et al., "Effect of immunity to the carrier protein on antibody responses to <i>Haemophilus influenzae</i> type b conjugate vaccines", <i>Vaccine</i> , <u>11</u> (1):546-551, (1993).
	C15	Grandoff et al., "Induction of Immunologic Memory in Infants Primed with <i>Haemophilus influenzae</i> Type b Conjugate Vaccines", <i>J. Infect. Dis.</i> , <u>168</u> :663-671, (1993).
	C16	Hayward et al., "Induction of Plasma Cell Differentiation of Human Fetal Lymphocytes: Evidence For Functional Immaturity of t and b Cells", <i>J. Immun.</i> , <u>119</u> (4):1213-1217, (1977).
	C17	Holmes et al., "The Biology of <i>Haemophilus influenzae</i> Type b Vaccination Failure", <i>J. Infect. Dis.</i> , <u>165</u> :5121-5128, (1992).
	C18	Insel et al., "Oligosaccharide-Protein Conjugate Vaccines Induce and Prime for Oligoclonal IgC Antibody Responses to the <i>Haemophilus influenzae</i> b Capsular Polysaccharide in Human Infants", <i>J. Exp. Med.</i> , <u>163</u> :262-269, (1986).
SD	C19	Ishioka et al., "MHC Interaction and T Cell Recognition of Carbohydrates and Glycopeptides", <i>J. Immun.</i> , <u>148</u> :2446-2451, (1992).

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Exam. Init.	Ref. Desig.	Description
SD	C20	Jennings et al., "Immunochemistry of Groups A, B, and C Meningococcal Polysaccharide-Tetanus Toxoid Conjugates", <i>J. Immunol.</i> , <u>127</u> :1011-1018, (1981).
	C21	Kaliyaperumal et al., "Carrier-induced epitope-specific regulation and its bypass in a protein-protein conjugate", <i>Eur. J. Immunol.</i> , <u>25</u> :3375-3380, (1995).
	C22	Konadu et al., "Synthesis, Characterization, and Immunological Properties in Mice of Conjugates Composed of Detoxified Lipopolysaccharide of <i>Salmonella paratyphi</i> A Bound to Tetanus Toxoid, with Emphasis on the Role of O Acetyls", <i>Infect. Immunol.</i> , <u>64</u> (7):2709-2715, (1996).
	C23	Konen-Waisman et al., "Self and Foreign 60-Kilodalton Heat Shock Protein T Cell Epitope Peptides Serve As Immunogenic Carriers for a T Cell-Independent Sugar Antigen", <i>J. Immunol.</i> , <u>154</u> :5977-5985, (1995).
	C24	Kumar et al., "Universal" T Helper Cell Determinants Enhance Immunogenicity of a <i>Plasmodium falciparum</i> Merozoite Surface Antigen Peptide", <i>J. Immunol.</i> , <u>148</u> :1499-1505, (1992).
	C25	Leclerc et al., "A synthetic vaccine constructed by copolymerization of B and T cell determinants", <i>Eur. J. Immunol.</i> , <u>17</u> :269-273, (1987).
	C26	Lett et al., "Immunogenicity of Polysaccharides Conjugated to Peptides Containing T- and B-Cell Epitopes", <i>Infect. Immunol.</i> , <u>62</u> (3):785-792, (1994).
SD	C27	Liptak et al., "Decline of pediatric admissions with <i>Haemophilus influenzae</i> type b in New York State, 1982 through 1993: Relation to immunizations", <i>J. Pediatrics</i> , <u>130</u> :923-930, (1997).

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Exam. Init.	Ref. Desig.	Description
SD	C28	Lucas et al., "Functional Differences in Idiotypically Defined IgG1 Anti-Polysaccharide Antibodies Elicited by Vaccination with Haemophilus influenzae Type B Polysaccharide-Proline Conjugates", <i>J. Immunol.</i> , <u>154</u> :4195-4202, (1995).
	C29	McNamara et al., "Monoclonal Idiotope Vaccine Against <i>Streptococcus pneumoniae</i> Infection", <i>Science</i> , <u>226</u> :1325-1326, (1984).
	C30	Marburg et al., "Bimolecular Chemistry of Macromolecules: Synthesis of Bacterial Polysaccharide Conjugates with <i>Neisseria meningitidis</i> Membrane Protein", <i>J. Am. Chem.</i> , <u>108</u> :5282-5287, (1986).
	C31	Moxon et al., "The Role of Bacterial Polysaccharide Capsules as Virulence Factors", <i>Curr. Top. Microbiol. Immunol.</i> , <u>150</u> :65-85, (1990).
	C32	Panina-Bordignon et al., "Universally immunogenic T cell epitopes: promiscuous binding to human MHC class II and promiscuous recognition by T cells", <i>Eur. J. Immunol.</i> , <u>19</u> :2237-2242, (1989).
	C33	Robbins et al., "Prevention of Systemic Infections, Especially Meningitis, Caused by <i>Haemophilus influenzae</i> Type b", <i>JAMA</i> , <u>276</u> :1181-1185, (1996).
	C34	Sad et al., "Bypass of carrier-induced epitope-specific suppression using a T-helper epitope", <i>Immunol.</i> , <u>76</u> :599-603, (1992).
	C35	Santosham M., "Prevention of <i>Haemophilus influenzae</i> type b disease", <i>Vaccine</i> , <u>11</u> (1):552-557, (1993).
SD	C36	Schneerson et al., "Preparation, Characterization, and Immunogenicity of Haemophilus Influenzae Type b Polysaccharide-Protein Conjugates", <i>J. Exp. Med.</i> , <u>152</u> :361-376, (1980).

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Exam. Init.	Ref. Desig.	Description
58	C37	Schneerson et al., "Quantitative and Qualitative Analyses of Serum Antibodies Elicited in Adults by <i>Haemophilus influenzae</i> Type b and Pneumococcus Type 6A Capsular Polysaccharide-Tetanus Toxoid Conjugates", <i>Inf. Immun.</i> , <u>52</u> (2):519-528, (1986).
	C38	Sidman et al, "Receptor-mediated inactivation of early B lymphocytes", <i>Nature</i> , <u>257</u> :149-151, (1975).
	C39	Tunkel et al., "Pathogenesis and Pathophysiology of Bacterial Meningitis", <i>Clin. Microbio.</i> , <u>6</u> (2):118-136, (1993).
58	C40	Valmori et al., "Use of Human Universally Antigenic Tetanus Toxin T Cell Epitopes as Carriers for Human Vaccination", <i>J. Immunol.</i> , <u>149</u> :717-721, (1992).

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